

U.S. Patent Application Serial No. **10/519,674**  
Amendment filed March 15, 2007  
Reply to OA dated January 8, 2007

### **REMARKS**

Applicant's corrected a typographical error in the application, and have amended the claims to clarify the present invention, with claim 2 incorporated into claim 1 and claim 3 written in independent form with inclusion of the subject matter of claim 2. Claim 2 has been cancelled. No new matter is involved.

As now amended, claim 1 is to a fluid control device that has a metal body with a fluid inlet channel, a fluid outlet channel and a communication channel for holding the two channels in communication. A metal slide member is vertically movable in a vertical passage including the communication channel for closing or opening the communication channel with an end portion thereof. In the fluid control device, at least the end portion of the slide member is made of a specific alloy, where the slide member is a stem having one conical end portion tapered toward an extremity thereof, and the stem is made of the specific alloy in its entirety, thereby eliminating the need for reinforcement with a hard facing material, and is provided with a handle attached to the other end portion thereof, the stem having an externally threaded intermediate portion screwed in an internally threaded portion formed in the vertical passage. Claim 3 is such a fluid control device where a solid cylindrical stem has a conical disk fitted thereon, and the disk is made of the specific alloy.

The Examiner's attention is drawn to three related pending applications and prior art cited therein. These applications are U.S. Serial No. 10/519,672, U.S. Serial No. 10/519,673, and U.S.

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Serial No. 10/519,675. The prior art cited in these related cases is presented in an Information Disclosure Statement filed on even date herewith.

In the Office Action, claims 1 and 2 were rejected under 35 U.S.C. 103(a) as obvious over Neuhaus (U.S. 2,091,874) in view of Ueda et al. (U.S. 4,883,544); while claims 1 and 3 were rejected as obvious in view of a combination of Knapp (U.S. 5,586,745) and Ueda et al. Reconsideration and removal of these rejections are respectfully requested in view of the present amendments to the claims and the prior art.

In the Office Action, Neuhaus and Knapp are cited to show, in Neuhaus, a valve having a needle valve (19) formed on the end of a stem (20), and in Knapp a valve having a stem (20) and a needle (18) fixed to a disc (10) attached to a stem.

In both primary references, Neuhaus and Knapp, the Office Action admits that neither reference discloses the use of the specified alloy of the present claim. The teaching of Ueda et al. are then combined, which teaches a similar alloy and it is alleged that it would be obvious to make the present metal slide member of the disclosed alloy because the alloy would provide excellent workability and excellent corrosion resistance.

While it appears that Ueda teaches a similar alloy and suggests that such an alloy has excellent corrosion resistance, especially seawater resistance and, excellent workability when the material is hot-worked into a heavy plate, or strip, or the like, the Ueda reference is to a process for producing the alloy and not any end product. Ueda refers repeatedly to heavy plates, slabs or strips formed by rolling and finishing and nowhere is any portion of a valve or valve stem discussed.

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There is especially no teaching or suggestion in Ueda that only a slide member, only a valve stem or only a disc attached to a valve stem should be made of any specific alloy. Only by referring to Applicants' specification is such a feature of a fluid control device taught or suggested.

In addition, Applicants' claims 1 and 3, as now amended are to a fluid control device where the stem (claim 1) or disk (claim 3) have the specific claimed alloy such that the need for reinforcement with a hard facing material is eliminated, as discussed in Applicants' specification at page 3, lines 4-7 and other locations.

Thus, Applicants believe the present claimed fluid control device is unobvious and patentable over the prior art and allowance of claims 1 and 3, as amended, is respectfully requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the applicants undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

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In the event that this paper is not timely filed, the applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

ARMSTRONG, KRATZ, QUINTOS,  
HANSON & BROOKS, LLP



William G. Kratz, Jr.  
Attorney for Applicants  
Reg. No. 22,631

WGK/lrj  
Atty. Docket No. **040700**  
Suite 1000  
1725 K Street, N.W.  
Washington, D.C. 20006  
(202) 659-2930



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PATENT TRADEMARK OFFICE

Enclosure: Information Disclosure Statement

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